SUBGROUP MEETING C

Endothelial Cell Heterogeneity and Organspecificity

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Endothelial cells (EC's), which originate from common hemopoietic stem cells, provide the seemingly uniform lining of the vasculature. However, this EC lining reveals a remarkable heterogeneity in terms of morphology and functionality. The organspecificity of EC's is primarily manifested by differential expression of gene-products, such as cell surface antigens or fibrinolytic activity. EC organ-specificity is the basis for regional selectivity of e.g. leukocyte adherence and tumor metastasis. Remarkably, many of the traits of EC heterogeneity are maintained upon isolation of EC's from diverse anatomical locations and can be studied in vitro. As a follow-up to last year's successful special interest subgroup meeting under the same title, this symposium will explore the cellular and molecular basis for some of the epigenetic factors which determine functional heterogeneity of phenotypically diverse endothelial cells. Such epigenetic factors might be humoral (cytokines or growth factors), extracellular matrix-resident, derived from intercellular signalling or might reflect selective EC adaptation to local variations in hemodynamics, or a combination of these parameters.

TENTATIVE LIST OF SPEAKERS AND TOPICS:

K. Spanel-Borowski, University Basel, Switzerland
Phenotypically diverse microvascular endothelial cells derived from ovaries

A. Fenyves, University Basel, Switzerland
Differential IFN-γ regulation of phenotypically diverse microvascular endothelial cell proliferation

L. Iruela-Arispe, University of Washington School of Medicine, Seattle, WA
Extracellular matrix molecules as regulators of angiogenesis

Joseph Madri, Yale University, New Haven, CT
Phenotypical modulation of endothelial cells by specialized extracellular matrix

T.F. Lane, University of Washington, Seattle School of Medicine, WA
Cu^{2+}-binding domains in SPARC regulate endothelial cell proliferation and angiogenesis in vitro

F. Moatter, Miles Res. New Haven CT.
Regulation of cyclooxygenase gene expression in pulmonary macro- and micro-vessel derived endothelium

D.L. Amrani, Univ. Wisconsin. Milwaukee, WI.
IL-6 regulation of PAI-1 gene expression in human microvascular endothelial cells

B. Sumpio, Yale University Medical School, New Haven, CT.
Differential responses of phenotypically diverse endothelial cells to cyclic mechanical deformations

F. Vargas, National Institute of Health, Bethesda, MD.
Distinct electrophysiological responses of phenotypically diverse endothelial cells

Source: https://www.industrydocuments.ucsf.edu/docs/ksmv0000